INTERNATIONAL BULLETIN
OF PLANT PROTECTION

1933 No. 8

## DISCOVERIES AND CURRENT EVENTS *

### Algeria: The Moroccan Locust (*Dociostaurus maroccanus*) (1).

3 May 1933. — Scattered and sparse hatching reported at the Douars Aïoun-el-Beranis, Tircine, Hassasna Cheraga, Hounet (Saïda).

6 May 1933. — Small and sparse hopper bands reported at Dra Labiod; Ouled-Malah of the Douar Boughzoul; Feid-el-Ahmar of the Douar Oum-el-Djellil; Bir-Hamou of the Douar Ouled-Anteur (Boghari).

8 May 1933. — Small and sparse hopper bands reported at Oued-Aroua of the Douar M'fatha, at an altitude of 900 m. (Boghari).

9 May 1933. — Three sparse hopper bands reported at the Douar Séfioun (le Télagh) over 5 to 6 hectares each.

15 May 1933. — Small and sparse hopper bands reported at Sidi-Madani and Fidjelia of the Douar Siouf, at an altitude of 1200 m. (Boghari).

19 May 1933. — Adults, not grouped, reported at Nouvion (Clinchant). Sparse hopper bands reported at Port-aux-Poules.

30 May 1933. — Eggs, not grouped, reported at Feid-el-Ahmar, Douar Oum-el-Djellil (Boghari).

31 May 1933. — Adults, not grouped, reported at the Douar Cosbate (Barika).

### Algeria: The Desert Locust (*Schistocerca gregaria*) (1).

1 May 1933. — Hatching reported at the Douars Branis, El-Outaya, Guedilla and Djemmorah (Aïn-Touta).

A swarm settled at Lechbour (Bordj-bou-Arréridj). Pairing.

A swarm settled at the Douar Bousmza (Akbou).

Swarms settled on 29 April at the Douars Medjana and Mansourak (Bibans) laid.

A swarm settled at Haouch Bendjeken of the Douar Djendel (Djendel) and departed at 4 p. m., flying N.

A swarm settled at Zaouia (6 km E. of Dellys). Left on the 2nd, flying S.

A swarm passed over the commune of Azarga, flying N.

A swarm passed over the commune of Dra-el-Mizan, flying N.

* Under this and the next heading the countries are arranged in French alphabetical order.

(1) Communication from the Government General of Algeria (Direction des Services Economiques) to the International Institute of Agriculture.

A swarm 40 km in width, driven by a south wind, reported in the N. of the commune of Sidi-Aïssa, flying N.

Swarms reported at the Douars Beni-Mansour (over 2 hectares), Tikseriden (over 4 hectares), Sebka (over 6 hectares) in the commune of Beni-Mansour.

Sparse swarms, driven by a south wind, reported at the Douars Hellal, Ouled-Anteur, M'fatha, Ouled-Marouf and Chahbounia (Boghari).

Hopper bands reported at several points and particularly to the N. W. of the post of Ouargla.

Hatching reported at Chaabet Tiflalassine, over the S. W. slopes of the Raa Aicha, and at Oued Guelbouna (Khenchela) of eggs reported laid from 25 to 28 March.

Hopper bands reported at Gigat-el-Hamra, on the trail of Khanga Sidi Nadji (Khenchela), from hatching reported 24 April.

Hatching reported at El-Khobna and El-Khomina (85 and 105 km S. W. of Ghardaïa).

Hatching from 1 to 3 May at Ach Ogab, Bouselghiouane, Oued-Malah, Igly, Oued-Arsat and Koudiat Ghoudi (Khenchela).

Hatching from 1 to 5 May at Tirimbou, Aidoul, Oued Melasseba, Tagsirt, Chaba-el Amra, Scklil Beida and Chabet Defla, near Khanga Sidi Nadji (Khenchela).

Hopper bands reported to the S. W. of Khanga Sidi-Nadji (Khenchela).

Hatching from 1 to 5 May at Diebel Boughezel and Magraoua, 20 km S. and S. W. of El Kantara (Aïn-Touta) of eggs reported laid from 4 to 9 April.

Hatching reported near Boudekhan (Khenchela).

Hopper bands reported at Oglat Tiodi and Oglat El Hamza, 12 and 22 km respectively from Boudekhan (Khenchela), travelling N.

Hatching in the region of Seiar (Khenchela) finished.

Hopper bands reported from 4 to 15 km from Seiar (Khenchela), travelling towards the N. and N. W.

Hatching from 1 to 3 May at Oued M'zab, 10 km S. E. of El Ateuf (Ghardaïa).

Hatching reported S. of Bou-Noua, 4 km S. E. of El Ateuf (Ghardaïa).

A swarm settled in the Oued-Eddous Valley (Bouira).

A swarm passed over Marnia in a westerly direction to settle on the Douar Beni-Ouassina, on the road from Marnia to Port Say. Pairing. Oviposition on 2 May.

Isolated locusts reported at the Douars Aokas, Beni-Amrous, Djoua, Bouandas, Beni-Hassain, Beni-Sagoual, Ifalène and Mansouriah, in the sand-hills along the coast (Oued-Marsa).

Isolated locusts reported on land belonging to the commune of Taher.

Isolated locusts settled to the S. of the Douar Aouzallel (Cacherou). Departed on 2 May flying towards the S.

2 May 1933. — Swarms coming from the S. E. settled and laid at Touasa (over 4 hectares), Terf (25 hectares), Nechta (10 hectares), Zerouga (1 hectare), Mesdour (30 hectares), Ouled Sidi Amar (80 hectares) of the Douar Dréat (M'sila).

A large swarm, coming from the S. W., settled at Oued Abdi (Aurès).
A small swarm, coming from the S., settled at Chemora (El Madher) and departed towards the S. E.
Swarms reported at Tifra and at the Douars Azrou, Beni-Oughlie, Ioudja (Sidi-Aich).
A small swarm, coming from the S., passed El Milia, flying N.
Swarms settled at the Douars Sidi-Brahim, Ouled-Triff, El-Main (Bibans).
A large swarm settled to the N. of Chellala des Adaouras (Sidi-Aïssa).
Laying reported at the Douar Tafraouat (Sidi-Aïssa).
A swarm settled ar Tikoura, 23 km S. S. W. of Maillot (Beni-Mansour).
Swarms settled at the Douars Aïn-Hazem and Souflat (Aïn-Bessem). Copulation.
Hatching reported near Ferkane (Tébessa).
A small swarm settled at the Douar Djouïdat (10 km E. of Marnia).
Hatching reported at Bou-Adam, 12 km E. of Doucen, Oued el Ozen (14 km N. E. of Doucen) and Matina (11 km E. of Ouled-Djellal).
Many swarms, coming from the S. and E. settled on the Douars Ouled-Sidi-Brahim, Ouled-Amara, Djebel Cessaad, Ouled-M'hamed el Mebarek (Bou-Saada).
Laying reported at the Douars Ouled-Sidi-Brahi (over 300 hectares) and Ouled-M'hamed el Mebarek (100 hectares).
A small swarm settled near Palestro.
A swarm settled at the Douar Tachachit over 5 hectares.
A swarm settled near Marnia. Pairing.
A swarm settled at the Douar Tirghane (Aïn-Boucif). Pairing and oviposition on 3 May.
A large swarm settled at Ampère and flew towards the S.
Hatching reported at Oued el Atrous, 7 km N. N. W. of M'chounèche(Aurès).

3 May 1933. — Egg-laying reported at Laouïd and Foun Ouled Louar, Douar Gosbate, over 6 hectares (Barika).
A small swarm, coming from the S., settled near El Madher in the afternoon over 10 hectares, and flew towards the S. E.
A small swarm, coming from the S., passed the Douar Erriche (Dra-el-Mizan), flying towards the N. E.
A swarm settled at the Douar Oued Djenane (Aumale) over 40 hectares, laying over 9 hectares at Chouf Beïda and El Magtoufa.
A swarm settled at the Douar Serdoun (Aumale) over 200 hectares.
Swarms settled at Oued-Sahel, Douar Tiksirident (15 km E. of Maillot) over 100 hectares, and at Hammam, Douar Inch Edallah (13 km W. of Maillot) over 2 hectares (Beni-Mansour).
Hatching reported at Khechen er Rih, Guénira, Oued-Mya, Haoud el Hazan, Tarfaïa, El Oulrat (Ouargla) of eggs laid from 11 to 21 March.
Hopper bands reported at Daïa ben Dahoua (10 km N. W. of Ghardaïa), travelling in a S. E. direction.
A large swarm, coming from the N. E., settled in Oued Belam (Bouïra). Pairing and oviposition on 4 May.

A swarm settled on Ued-Sahel (Tazmalt) and laid. On 4 May it flew towards the S.

A small swarm, coming from the S. W., passed Aïn-Roua (Sétif) flying towards the N. E.

Swarms reported at Oued-Amaghir (Akbou) over an area of 7 km × 400 m.

A swarm settled in Oued-Sahel, Douar Aït-R'sine (Akbou).

4 May 1933. — A swarm coming from the S. settled on the Douar Bou-Taleb (Rhira), laid over 60 hectares and flew towards the S.

A swarm of 1 km settled at Aïn-Sefra. It departed on 6 May, fiying towards the W.

A large swarm, coming from the N., settled on the Douar Oued-Berdi (Aïn-Bessem) and laid over 18 hectares.

Large swarms, coming from the E., settled on the Douars Ouled-Anteur, Tchegala and Sidi-Yacoub (Boghari). Pairing.

A small swarm, coming from the S. W., settled at Tabent el Haouia and Amar Ouled Si Ali (El Madher), and flew towards the S. W.

A swarm settled in Oued-Sahel, Douar Tigrine (Akbou).

Small swarms, coming from the S. W., settled at the Douars Khelidjène and Harbil (Le Guergour). Pairing and oviposition.

A swarm coming from the W. passed Douar Braham (Rhira) and returned towards the W.

Swarms coming from the S. passed the Douars Boughzoul, Oum-el-Djellil, Saneg (Boghari), flying towards the N. and N. W.

Swarms settled on the Douars Sidi-Zouikia (over 100 hectares), Hïn-Sazem (over 300 hectares), Errich (Aïn-Bessem). Egg-laying reported at the Douar Souflat (Aïn-Bessem).

Small swarms coming from the S. passed Boughzoul, Oum-el-Djellil, Saneg (Boghari), flying towards the N. and N. W.

Swarms settled on the Douars Sidi-Zouikia (over 100 hectares), Aïn-Hazem (over 300 hectares), Errich (Aïn-Bessem). Egg-laying reported at the Douar Souflat (Aïn-Bessem).

Small swarms coming from the S. passed Berrouaghia, flying towards the N. W.

A large swarm settled in the evening at the Douar Aouzalel (Cacherou). Pairing.

A small swarm settled at Boghar.

A swarm settled at Kerhane, Naït Ouakli and Tigherghar el Bougakal, Douar Tigzemth (Beni-Mansour), over 4 hectares.

Very large swarms coming from the E. passed or settled on the Douars Birine, Kef Lakdar, Tirghane (Aïn-Boucif) over 60 km.

Hatching reported at El Haes (25 km S. W. of Aïn-Defila), commune of Barika, of layings reported 10 April.

Hatching reported from 4 to 7 May at Ach Ogab, Bouselghiouane, Igly, Oued Malah, Tamarset and Mekseur, region of Ouldja (Khenchela).

A swarm coming from the N. passed Yakouren (Arasga) at midday, flying towards the S.

Hopper bands reported at Bou-Moussa, near Négrine (Tébessa), travelling towards the N.

5 May 1933. — A swarm coming from the S. E. settled at Tameto un et, Douar Dréat (M'sila), laid and flew towards the W.

Hatching reported at the Douars Bitam and M'doukal (Barika).

Dense general hatching reported at the Douars Brania, El Ouraya, Gueddila and Djemora (Aïn-Touta).

A large swarm passed Seddouk flying towards the N.

A swarm settled in Oued-Soummam (El Kseur) and laid.

A swarm settled near Takrita (Soummam).

Laying reported at Oued Bounafa (5 hectares), Oussissira (6 hectares), Bellevue (9 hectares) of the Douar Oussera, and at Batmat Chouf (25 hectares) and Oued el Hadjel (25 hectares) of the Douar Serguine (Chellala).

Swarms coming from the S. and S. E. settled at the Douars Aziz, Ouled Hellal M'fatha Siouf, Ouled-Anteur (Boghari). Pairing.

A swarm 3 km in length, coming from the N. W., passed Lavigerie (Djendel) at 4 p. m., flying S. E. and settling at Ouled-Ali (Douar Chrib) over 20 hectares.

A swarm settled at Sakamody (Arba) and flew towards the S.

A small swarm coming from the S. E. settled at Temchit (Batna) over 4 hectares.

A swarm settled at Oued-el-Ma, Douar Ouldja, over 5 hectares (Khenchela).

Swarms settled and laid at Oued Beder (over 3 hectares) and Sjaarir (over 1 hectare) of the Douar Mellagou (Khenchela).

Hopper bands reported at Oued Djerada, near Ferkane (Tébessa), travelling towards the N. E.

General hatching in the region of Boudekhan (Khenchela).

Hopper bands reported at Chaabet el Nizab (40 km N. of Ghardaïa).

Abundant hatching reported over 3 km E. of Ksar El Haouita (45 km S. W. of Laghouat) over 10 square km.

Hatching reported at Oued Bouguerour (Khenchela) of eggs laid 29 March.

Bands of hoppers of the 5th stage reported at Foum-el-Guitoune (Khenchela).

Hatching reported from 5 to 8 May in the region of Négrine (Tébessa).

Hatching reported at El Habel, Dissa and Dessa, M'choumèche, Douar M'choumèche (Aurès).

Hatching reported on 5 and 6 May at Tisdein, 15 km N. E. of Damoune, Douar Kimmel (Aurès) of eggs reported 11 April.

Hatching reported at Djebel Telezela, 3 km N. W. of Titen Yahia (Télagh).

A small swarm settled at Aïn-Tiddès, Douar Sefioune (Télagh).

Swarms settled at the Douar Kef Lakhdar (Aïn Boucif), copulated and laid.

Egg-laying reported near Marnia.

A swarm settled at the Oued Isser, near Thiers (Palestro) and laid over 100 hectares.

A small swarm coming from the N. passed Ben Chicao (Berrouaghia), flying towards the S.

6 May 1933. — A large swarm coming from the S. E. settled at Aïn Dèze, Douar Madena (Frenda) over 10 km and then flew N. W.

A swarm settled at Feid el Hattab, Douar Madena (Frenda).

A small swarm settled at the Douar Benian (Mascara mixte).

A swarm coming from the S. settled 3 km S. E. of Trolars Taza (Tenier el Haad), over 100 hectares.

Egg-laying reported over 200 hectares S., and 600 hectares N., of the commune of Sidi Aïssa.

Egg-laying reported at Lachoufalkou, near Bouïra.

Egg-laying reported 2 km E. of Berroughia.

A large swarm coming from the S. E. settled at Aïn Serafil, Douar Ghrib (Djendel) and laid over 100 hectares.

A swarm settled al Tifra (Soummam) and copulated.

Large swarms settled at the Douar Ikedjane (Soummam).

A small swarm settled at Oued Hamidou (Arba).

Hatching reported at Bouibatte and Nebka, Douar M'doukal (Barika).

Hatching reported at Aïn Larabi, 7 km. N. N. E. of Aïn Madhi (Laghouat) over an area of 350 square metres.

Egg-laying reported from 6 to 10 May at Nedah Firas (over 100 hectares), Koudiat Trab (over 200 hectares), Mezgoub (100 hectares), Teniet Tahna (200 hectares), Douar Oued Taga (Aurès).

Hatching reported at El Hassi Safra, Douar Bitam (Barika) of eggs reported on 7 April.

Hopper bands reported from 1 to 5 km N. and N. E. of Ghardaïa, travelling towards the S. and S. E.

Hatching reported from 6 to 10 May at Fed Sellah, Oued Rearab, Aïdoul near Khanga Sidi Nadji (Khenchela).

Hopper bands reported S. of Khanga Sidi Nadji (Khenchela) travelling towards the N.

Hatching from 6 to 12 May at Dakhla el Haouita (50 km S. W. of Laghouat).

Hopper bands reported at Oued Touzouz (4 km N. W. of Ghardaïa) travelling towards the S. E.

A small swarm settled at Souk-el-Tenine, Douar El Isseri (Palestro), over 3 hectares, copulated and laid.

Three small swarms settled at the Douar Guerrouma (Palestro).

Egg-laying reported at the Douars Djebel Messaad (100 hectares), Ouled Amara (100 hectares), Oulad Ameur Guebala (200 hectares), Oulad Ameur Dahara (100 hectares), Oulad Ghrib (200 hectares) belonging to the commune of Bou-Saada).

7 May 1933. — Swarms coming from the S. E. settled and laid at Sabaa Lahmar (over 2 hectares), Oum Sekka (1 hectare), Reghbet Boughelane (1 hectare), Ced El Djemaa (2 hectares), Douar Beni-Ilmane (M'sila).

Moderately large swarms coming from the W. settled at the Douar Tameksalet (Remeh) over 200 hectares. Pairing. Oviposition from 8 to 10 May.

A swarm settled at Garra, Douar Tiziret (Aïn-Bessem) over 150 hectares, and laid.

Egg-laying reported at Guetrine, Douar Mihoub (Aïn-Bessem) over 3 hectares.

Swarms coming from the E. settled at the Douars Ouled Auteur, Aziz, Ouled Hellal, and Siouf (Boghari). Pairing.

Very abundant hatching reported at Oued Bouniaguiguen, Aïn Madhi, the plain of Milok, El Haouita, Tadjemout, Mekhalif Djorb (Laghouat).

Hatching reported at Bled Selaouine (50 km S. E. of Barika) over 2,000 hectares.

Hatching reported from 7 to 9 May in the region of Aïn-Defila (Barika).

Hatching reported at Oued el Ahmar, Aïn-Naïmia and Oued Smar, Douar M'doukal (Barika) of eggs reported laid from 7 April.

Hopper bands reported at Bekkoucha, Ignediane, Azeb, Charghar, from 3 to 16 km from Seïar (Khenchela), travelling N. N. E. and N. W.

Hatching reported 7 and 8 May at Bennour and Kef Tiour, Douar Kimmel (Aurès) of eggs reported laid from 20 to 22 April.

Hatching reported from 7 to 10 May at Tisdein, 15 km N. E. of Dermoune, Douar Kimmel (Aurès) of eggs reported laid from 11 to 24 April.

Hatching reported 7 and 8 May near Négrine (Tébessa).

8 May 1933. — A swarm coming from the S. E. settled at Ouled Sidi-Amor, Douar Dréat (M'sila) and laid over 300 hectares.

Hatching reported in the commune of Aflou.

A large swarm settled and laid at the Douar Oued Taga (Aurès) over 400 hectares.

A swarm settled in the valley of Oued Taslent, Douar Ighran (Akbou) and laid over 25 hectares.

A swarm settled at the Douar M'ciama (Akbou) over 15 hectares.

Swarms settled at Douars Beni Oughlis, Tifra and Ikedjane (Soummam), copulated and laid.

Hatching reported at Bordj Senoussi, Mekafir, Bouchaker and the Prise d'Eau (environs of Laghouat).

Sparse hatching reported at El Hamar Labiod, 5 km E. of Nebeh Eddib (Barika).

Hatching reported at Hamia Nekka, Bouibet, Oued Chergui, Oued Azlef, Douar M'Doukal (Barika) of eggs laid on 7 April.

Hopper bands reported at Oued el Atrous, 7 km N. N. W. of M'chounèche (Aurès), the hatching of which was reported on 2 May, travelling towards the S. E.

A swarm settled at 8 a. m at Berkoukia Djouidat (4 km E. of Marnia).

Hopper bands coming from the S. reported at Oglat Trodi and Oglat el Hamza, 12 to 25 km S. of Boudakhane (Khenchela), travelling N.

Hatching reported at Igly, Tamanit, Tabaalit, Oued Melah, Oued Arsat, Mekseur, 1 to 15 km from d'Ouldja (Khenchela).

Small swarms settled near Berroughia.

Hopper bands reported in the region of d'Ouldja (Khenchela).

Egg-laying reported at the Douars Rebaïa, Retab, Mongornou, Ouled Deid, Ouled Chair, Ouled Seghouane (Berrouaghia).

9 May 1933. — A small swarm settled at Harchaïa (20 km S. of Méchéria), laid over 2 hectares and flew towards the E.

Egg-laying reported at Teniet Talma, Douar Oued Taga (Aurès) over 200 hectares.

A swarm coming from the E. settled near Moudjebeur, Douar M'fatha (Boghari). Departed 10 May, flying towards the N. W.

A large swarm passed Sidi Mimoun (Saïda), flying towards the N.

Egg-laying reported at Aïn-Dèze, Gaouzem Toucha, Douar Madena, and Feid el Hattab, Mackouir, Gaouzern Zerkour, Douar Ghouddi (Frenda).

A swarm coming from the S. settled at the Douar Benian (Mascara mixte) over 15 hectares.

Egg-laying reported in the Oued Eddus (Bouïra) over 300 hectares.

A swarm coming from the W. settled at the Douar Ouled Bou Arif (Aumale) over 10 hectares. Pairing.

A swarm settled at El Kharet, Douar Oued Djenane (Aumale).

A large swarm coming from the S. settled in the Oued Chélif, at Aïn-Serafil, Douar Ghrib (Djendel). Pairing.

General hatching reported at the Douars El-Outaya, Branis, Gueddila, El Kantara (Aïn-Touta), beginning from the Douar Aïn-Zatout.

A moderately large swarm settled near Taourirt, Douar Fenaïa (Soummam).

Large swarms settled at Douars Drabila and Beni-Maoujhe (Guergour) and laid.

Small swarms reported at the Douars Beni Ourtilane, Beni-Chebana and Tala Hacène (Guergour).

Hatching reported at Seridja (7 km E. of Laghouat) over 1 square km.

Hatching reported at El Ghicha, Kherfa and Naia (S. W. of Aflou).

Hatching reported from 9 to 15 May at Chabet el Abed and Berkoukia, Douar Djeuidat (18 km N. E. of Marnia).

Hatching reported 9 and 10 May at Nebka, Bouibat, Oued Lahmar, Douar M'doukal, and El Hassi Safra, Douar Bitam (Barika), of eggs reported laid on 7 April.

Hatching reported at Khenig Sekoum, Douar Behroum (Barika).

Moderately large swarms reported in the valley of the Oued Eddous (Bouïra).

Small swarms coming from the S. and S. E. settled at Rebaia and Oued Seghouane (Berrouaghia) and laid in the ravines.

Hatching reported in the regions of Titen Yahia and Bedeau (Télagh).

Egg-laying reported at the Douars Oulad Ameur Dahara (over 5,000 hectares), Djebel Messaad (30 hectares), Roumana (600 hectares), Sou-Saada (200 hectares) of the commune of Bou-Saada.

10 May 1933. — A swarm coming from the S. settled at Teniet Benkerfa Douar Ouitlène (M'sila) and laid over 50 hectares.

A moderately large swarm, coming from the S. E., settled in the valley of the Chéliff, 7 km N. of Duperré. Pairing and oviposition on 11 May.

Swarms settled at El Maherna, Douar Oueld Djenane and Ramal, Douar Ouled Ferha (Aumale).

Swarms settled and laid at Boghar.

A large swarm, coming from the S. E., passed Lavigerie (Djendel) in the morning for 2 hours, flying towards the N. W.

Swarms settled in the valley of the Soummam (Soummam), copulated and laid over 6 × 50 km.

Hopper bands reported at Nebka Bouibat, 3 km E. of M'doukal (Barika), travelling towards the N. W.

Very large hopper bands reported 3 km S. of Négrine (Tébessa), travelling towards the N.

Large hopper bands coming from the S. reported at Bled Izaouen, Kef el Dab, Chabet Batta, Chabet Darmabt, Foum Chabba, Region of Seiar (Khenchela).

Much hatching reported 9 km S. of Nebeh Eddib (Barika).

Hatching reported at Chaabet Datmane and Tiflalassine, region of Djellal, (Khenchela) of eggs reported laid on 13 April.

Hopper bands reported in the region of Seiar (Khenchela) travelling towards the N. N. E. and N. W.

A sparse swarm coming from the W. settled at 5 p. m. at Takbalet (Montagnac). Laid on 11 May.

Hopper bands reported at 3 km S. E. of Ghardaïa, travelling S.

Hatching reported from 10 to 13 May in the region of Négrine (Tébessa).

Hopper bands coming from the S. W. reported at Hassi Saïf and Daïat Leck, Ouled Djellal, travelling towards the N. E.

11 May 1933. — Hatching reported at the Douar Bou Hamadon (M'sila) of eggs laid 22 April.

A moderately large swarm passed 13 km. from Miliena, flying towards the N. W.

A swarm settled in the region of Levacher (Braz). Departed on 12 May at 10 a. m. flying towards the W.

A swarm settled at the Douar Aouzalel (Palikao) and laid.

A swarm settled at Takbalet (Montagnac) over 45 hectares.

Swarms settled near Bertville and also at the Douars Sidi Zouikia and Metennane (Aïn Bessem), and laid.

A swarm reported in the region of Damiette.

A swarm coming from the S. settled at the Douar Ouled Tebben (Rhira) and laid over a length of 500 m.

Egg-laying reported over 100 hectares in the Oued-Soummam (El-Kseur).

Egg-laying reported over 10 hectares in the Oued-Amisour, near Bougie.

Hatching reported at Delza and Madher el Ournik (70 km. S. E. and 25 km S. S. E. of Laghouat).

Hopper bands reported E. of the Ksar of Guerrara (80 km E. N. E. of Ghardaïa), travelling towards the W.

Hatching reported 12 km. S. W. of Aïn-Hadjar (Barika).

Hatching reported from 11 to 13 May 5 km. N. E. of Barika of eggs laid April 17.

Hatching reported at Djerat el Hamama, 2 km S. S. W. of Ouldja (Khenchela).
Hopper bands reported 15 km N. N. E. of Ouldja (Khenchela).
Hatching reported from 11 to 15 May in the Oued el Arab, near Khanga Sidi Nadji (Khenchela).
Hopper bands reported to the S. of Khanga Sidi Nadji (Khenchela).
Swarms settled at the Douars Zaatit, Oued Oughat and Mongornou (Berrouaghia) and laid.
Hopper bands reported at Cida, Smara and Matina (Ouled Djellal. Laying reported at the Douars Mezrenna and Ziana (Tablat).

12 May 1933. — Swarms coming from the S. W. settled at the Douars Ouled Trif and Sidi Brahim (Bibans) and laid over 70 and 20 hectares.
Hatching reported at the Douar M'cif (M'sila).
A small swarm settled at 3 p. m. on the hills of Chéliff at Duperré, and laid.
Large hopper bands reported in the region of M'chounèche (Aurès).
General hatching reported at M'doukal, Souk des Ouled Madja, Magra and Aïn Tasalel (Barika).
Hopper bands reported at M'doukal and Souk des Ouled Nadja (Barika).
Hatching reported in the region of Boudourkane (Khenchela).
Hopper bands reported in the regions of Seïar, Djellal and Boudourkane (Khenchela).
Hopper bands reported near Négrine (Tébessa).
Hatching reported at the Oued Mekhabet, Oued Messad and on the Tajmout road (Laghouat).
Small swarms reported in the mixed commune of Remchi.
Hopper bands reported 5 km from Ouled Djellal.
A small swarm settled at the Douar Beni Mileuk (Cherchel) over 2 hectares.
Egg-laying over an estimated area of 15,000 hectares in the mixed commune of Saïda.

13 May 1933. — A swarm coming from the S. E. settled at Aïn-Serafil and Dolfusville (the Djendel). Pairing and oviposition on 14 May.
A swarm coming from the S. settled at the Douar Djebel Lough (Djendel) and laid over 85 hectares.
A swarm coming from the S. W. settled at the Douar Bouzina (Aurès).
Swarm settled at the Douars Beni Ghomeriane and El Aneb (30 km W. of Miliana).
A large swarm coming from the S. settled at Tafraous (Saïda). Departed 14 May, flying towards the N. E.
A moderately large swarm settled 12 km from Franchetti (Mascara).
Swarms reported at Sainte-Monique and St. Cyprien (Attafs).
A swarm coming from the S. settled at 9 a. m. at Grand Guergour (4 km S. of Aumale) and laid.
Hatching reported at the Douars Magra, Aïn-Hadjer and Barika (Barika).
Egg-laying reported at the Douar Tahanent (Aïn-Touta).
Hatching reported at Bordj Guenifita, Col des Sables and El-Adjeb (Laghouat).
A small swarm settled in the Oued Messelmoun (Cherchel).

Hopper bands reported at Dakhla el Haouita (50 km W. S. W. of Laghouat), travelling towards the N. E.

14 May 1933. — A swarm coming from the S. E. settled at the Douar Kessabia (M'sila) and laid over 100 hectares.

Swarms coming from the S. settled at the Douars Maalha and El-Isseri (Palestro) and laid.

A swarm coming from the S. settled 2 km 500 m. N. of Aumale and laid.

Hatching reported at Makmesa (50 km S. W. of Aflou).

Hatching reported at the Douars M'doukal, Barika, Magra (Barika).

Hopper bands reported at the Douar M'doukal (Barika), travelling towards the N.

Hatching reported at Tmessort, Douar Kimmel (Aurès) of eggs laid from 20 to 23 April.

Hatching and hopper bands reported in the regions of Ouldja and Boudourkane (Kenchela).

Hatching reported at Bekhedache, Boutrekfine, Sidi Makloul and also at the shooting ground (Laghouat).

Hopper bands reported 4 kms N. W. of Ghardaïa, travelling S. E.

Hopper bands reported at Kef el Guernan and Dra Remel (Ouled Djellal).

Hatching reported at Kef Trab, Chaleb Merzoug and Mendi (Ouled Djallal).

15 May 1933. — A somewhat large swarm settled at the Douars Zouggara and Tacheta (le Braz).

Three swarms settled at 6 p. m. 6 km W. of Duperré. Pairing and some laying on 16 May.

A swarm settled at the Douar Tighzert (Teniet-el-Haad) and laid over 50 hectares.

A small swarm settled at the Douar Medjadja (Chéliff) and afterwards flew towards the N.

Three large swarms passed Warnier (Chéliff) flying towards the N.

A small swarm coming from the W. (Douar Medjadja and Chéliff) passed the Douar Maine (Ténès) flying towards the S.

A swarm coming from the S. settled at El-Marsa (Ténès) over 10 hectares. Departed on 16 May.

A swarm settled at the Douar Beizid (Seraou) and laid over 3 hectares.

A swarm coming from the S. W. passed the Douar Heumis and Fromentin (Ténès), flying towards the N.

A swarm coming from the N. E. settled at midday 2 km E. of the Douar Taria, covering 200 hectares.

A small swarm coming from the S. settled at 6 p. m. at the Douar Chaouachi (Cassaigne) over 22 hectares.

A small swarm coming from the S. W. passed Renault at 6. p. m., flying towards the N. E.

A small swarm coming from the S. E. passed Zemmoral flying towards the N. N. W.

A large swarm settled at the Douar Djoua (Oued-Marsa).

A swarm coming from the S. E. settled at the Douar Beni Ilmane (M'sila) and laid.

A swarm coming from the S. W. passed Bou-Moussa (Tébessa) flying towards the N. E.

General hatching reported from 15 to 21 May at Aïn-Hadjar, Souk des Ouled Nadja, Magra and Nebch Eddib (Barika).

First hatching reported at the Douar Gosbate (Barika).

Hopper bands reported from 15 to 21 May at the Douar Berhoum (Barika).

Hopper bands reported from 15 to 25 May in the region of Soukies Betita (Tébessa), travelling towards the N. N. E.

Egg-laying reported at Djebel Groum, Oued Soltan, Djebel Bouza, Djebel Lakhal, Draa Boumia (Aïn-Touta).

Hatching reported 15 and 16 May in the region of Sidi-Masmoudi (Aurès).

Hopper bands reported 15, 16 and 17 May at the Douars Oulach and Tadjmalet (Aurès).

Hopper bands reported in the region of Seïar (Khenchela).

Hatching reported at El-Hmaïa, Metlili, the Pigeons' Rock, Djebel Dakhla (Laghouat).

Very sparse swarms reported at the Douars Kréan and Oulad Riach (Remchi).

Egg-laying spread over 650 hectares.

Many large swarms, reported throughout the first half of May in the annexed region of Djelfa, have laid densely over 6,500 hectares.

Small swarms settled near Sakamody (Arba) and laid.

Hatching reported from 15 to 27 May at the Douar Beni-Ouassine (Marnia).

Hatching reported from 15 to 25 May in the regions of Messaad, Zouar, Aïn-el-Ibel, Timerkmert, Oued-Seddeur and Zénina (Djelfa).

16 May 1933. — A swarm settled at Chanzy. Pairing and oviposition.

A swarm coming from the S. passed Champlain (Berrouaghia) flying towards the N.

Egg-laying reported at Chaïbia (Cassaigne) over 20 hectares.

A small swarm settled at Ténira. Pairing and oviposition.

Large swarms settled at the Douar Messoulane and at Titen Yahia (Télagh) and laid.

A large swarm settled at the Douar Ycelna (Frenda), afterwards flying towards the N. E.

A small swarm coming from the W. flew over the Douar Beni Missel (Nedromah) and turned again towards the W.

A swarm settled at the Douars Makda and Guerdjoun (Mascara) over 20 hectares.

A small swarm settled at Mezzaias (Bougie).

Hatching reported at Bourgueroui near Djellal (Khenchela).

Hopper bands reported from 16 to 20 May at Khanga Sidi Nadji and also in the region of Djellal (Khenchela).

Hopper bands reported in the region of M'chounèche (Aurès), being the hatching of 27 April.

Hopper bands reported at Oued-el Bir near Bir el Attee (Tébessa), being the hatching of 10 May, travelling towards the N. W.

Hatching reported at the Bordj of Sidi-Maklouf (Laghouat) over 1 square km.

Hopper bands reported at El-Atteuf (10 km E. S. E. of Ghardaïa).

A small swarm settled at Djebel Karouba (La Mina).

A swarm extending over 4 square km passed Bouguirat (Mostaganem), flying towards the N. W.

17 May 1933. — Swarms settled at the Douars Ouled Ferguen and Ousera (Berrouaghia). Oviposition over the Douar Ousera.

Hatching reported at the Douars Saïda, Selmone and Ouitlène (M'sila).

Swarms coming from the N. settled at the Douars Souflat (over 50 hectares) and Mihoud (laying over 20 hectares) in the commune of Aïn-Bessem.

A swarm coming from the N. N. E. settled at midday at the Douars Beizig and Rouabah (Sersou).

Swarms settled at the Douars Bethaïa, Beni Chaeb, Ouled Ghalia (Chéliff). Pairing.

Swarms settled at the Douars Boukram (over 15 hectares), Guerrouma (over 10 hectares), El-Isseris (over 1 hectare), in the commune of Palestro.

A swarm settled at Maoussa (Mascara) over 20 hectares.

A swarm coming from the S. E. settled at 6 p. m. 12 km E. of Berthelot and laid on 18 May over 30 hectares.

Very large bands of hoppers of the 3rd and 4th stages reported between the oases of M'Raïer at Meggarine (Touggourt).

A swarm settled at the mouth of the Oued Sidi Ahmed (Port Gueydon) and laid on 22 May.

General hatching reported at the Douar Gosbate (Barika).

Hopper bands reported from 17 to 19 May in the region of M'chounèche (Aurès).

Hatching reported at the Douars Tahamont and Djebel Groun (Aïn-Touta).

Hopper bands reported at the barrage of Ksar de Ghardaïa, travelling towards the S.

A swarm settled 500 km N. W. of Cape Ivi (Cassaigne).

Swarms settled at the Douars Tacheta of Zouggara (les Bras) and laid.

Laying reported at the Douars Sidi-Khelifa and Metenane (Aïn-Bessem).

18 May 1933. — Swarms settled on 18 and 19 May on the left bank of the Sebaou (the Marshal's Camp) and laid over a length of 6 km.

A small swarm settled near Ténès and laid.

A swarm settled near Téniet-el-Haad over 20 hectares.

A large swarm, coming from the S. E. settled at the Douar Mettenane (Aïn-Bessem).

A swarm coming from the S. W. settled at 1 p. m. at the Douar Rouabah (Sersou) over 10 hectares. Departed on 20 May, flying towards the N. E.

A small swarm settled at the Douar Sefioun (Télagh) and laid.

A large swarm settled at the Douar M'hamid (Télagh), covering 100 hectares.

Large swarms coming from the S. W. settled in the evening at Chaïbia and Ouillis (Cassaigne) and laid.

Hatching reported at the Douars Ait-R'zine and Bou-Hamza (Akbou).

A swarm settled at the Douar Mallasefla (Palestro) over 2 hectares.

Hatching reported at the Douar Mekarta (Maadid).

Small swarms coming from the S. E. settled in the evening at the Douars Ouled Bougheddou and Aouisset (Tiaret).

A very large swarm coming from the E. settled at the Douar Adjaletes (Aflou), laid, and flew towards the N.

A swarm reported at Trumelet.

A large swarm settled near Bougie.

Hopper bands reported at the Djebel Saora and Bir Er Ogla, in the Region of Aïn-el-Hadjar (Barika), being the hatching of 11 May. They were travelling towards E. N. E.

Hatching reported at Sed Bounegueur and Djelfet Naceur (Barika) of eggs laid from 25 to 27 April.

Hopper bands reported from 18 to 23 May in the regions of Ouldja and Seïar (Khenchela), travelling towards the N. E. and N. W.

Hatching reported at the Douar Tajmout (Aurès).

Hopper bands reported from 18 to 21 May at the Douars Oulach and Tadjmout (Aurès), travelling towards the N.

Egg-laying reported at Djebel Groun (Aïn-Touta).

Egg-laying reported at the Beni-Sliman (Tablat) over 1 hectare.

19 May 1933. — Hatching reported at the Douar Maadid (Maadid).

Hopper bands reported 70 km N. E. of El-Goléa.

Egg-laying reported in Oued-Fodda over a length of 5 km (Chéliff).

A small swarm settled at 4 p. m. 30 km E. of Tigzirt.

A swarm coming from the S. E. settled 6 km from Berthelot over 30 hectares. Pairing.

A large swarm coming from the S. settled at Ténira.

A swarm coming from the S. W. settled near Ouillis (Cassaigne) and laid over 70 hectares.

First hatching reported at the Douars Bou-Thaleb and Hamma (Rhira) of eggs laid on 18 April.

A swarm settled at the Douar Ouled Nehar Cheraga (Sebdou) and laid over 4 hectares.

Hatching reported at Djorf Baroud, Douar Tlalsa (Marnia).

Hatching and hopper bands reported from 19 to 21 May at the Douar M'doukal (Barika).

Hopper bands reported 70 km N. of El-Goléa, travelling towards the E.

Hopper bands reported at Oued Khafoura (24 km N. of Ouled-Djellel), travelling towards the N. E.

Hatching reported at Lograbia (35 km N. W. of Ouled-Djellal).

Hatching reported at the Douars Oulad sidi Brahim, Oulad Slimane, Oulad Mohamed, M'barek and Roumana (Bou-Saada).
Various small swarms settled from 19 to 21 May at the Douars Beni Kouffi, Bou-Nouh and Frikat (Dra-el-Misan).
General hatching in the regions of Titen Yahia and Magenta (Télagh).

20 May 1933. — General hatching reported at the Douars M'cif, Saïda, Ouled Addi, Selmane, Bou-Hamadou (M'sila).
A swarm coming from the S. settled at the Douar Siouf (Boghari).
A swarm reported at Guyotville.
A large swarm coming from the E. N. E. settled at Rezzaz (Blad-Touaria) and laid over 50 hectares.
A swarm settled 5 km from Sebdou and afterwards flew towards the N. W.
A swarm settled on the hills of Chéliff at Aïn-Tédelès and laid.
Hatching reported near the Moroccan frontier (Marnia).
A large swarm settled at the Douar Benismier, 4 km S. of Lamoricière (Sebdou), covering 1 square km, and laid.
First hatching reported at the Douar Beni-Oughlis (Soummam).
A small swarm settled at Nazereg (Saïda).
Swarms reported at the Douars M'sala and Tifra (Soummam).
General hatching from 20 to 25 May at the Douars Tagleit, Maadid and Mekerta (Maadid).
Hopper bands reported at Seïar (Khenchela) travelling N. N. W.
General hatching at the Douar Tahament (Aïn-Touta).
A large swarm settled at 3 p. m. to the N. of Letourneux and laid over 20 hectares.
Large hopper bands reported in the region of Biskra.
Hopper bands reported in the regions of Messaad, Zaccar, Aïn-el-Ibel, Timerkmert, Oued Seddeur and Zenina (Djelfa).
Large swarms settled at the Douars Tizara, Ziana, Tourtatsine and El Ouzana (Tablat), and laid.
Large hopper bands reported at the Douar Branis (Aïn-Touta).

21 May 1933. — Hatching reported at the Douar El-Ksour (Aïn-Touta).
Hatching reported at the Douars Amalou, Chellata, Tamakra, Taznialt and Tigrine (Akbou).
Various swarms coming from the S. settled at Letourneux over 60 hectares.
Hatching reported at the Douar Gosbate (Barika).
Hopper bands reported in the regions of Bedeau and Titen Yahia (Télagh).

22 May 1933. — Hatching reported at the Douar Taguedide (Aumale).
Hatching reported at the Douars El-Main and Ouled Trif (Bibans).
A swarm settled at Aïn-Féhan.
A large swarm coming from the S. settled at Dombasle.
Hatching reported on the outskirts of Barika and Maadid.
Hatching reported at the Douars of Hadjeres and Selamates (Sidi-Aïssa).

Egg-laying reported at the Douars M'zalla and Abrarès (Soummam), in Oued Dass over 6 km.
Moderately large swarms settled at Rivet (near Algiers) and laid.
A small swarm settled 5 km S. S. E. of Descartes.
Hatching and hopper bands reported from 22 to 31 May in the region of Berhoun (Barika).
Hopper bands reported at Aïn-el Hadjar (Barika).
First hatching reported at the Douar Beni-Oughlis (Soummam).
Hatching reported on 22 and 23 May at the Douar M'doukal (Barika).
Small swarms passed the Douars Beni-Aïssi and Iraten (Fort-National) flying towards the N. W.
A swarm reported at the Douar Żenata and Oulas Alaa (Remchi).

23 May 1933. — A small swarm settled near Méchéria. Departed on 25 May, flying towards the S.
Hatching reported near Thiers (Palestro).
A large swarm settled at Bellecôte and laid over 250 hectares.
A swarm settled near Pélissier and laid.
Egg-laying reported at the Douars of Oulad Yagoub Cheraga (Aflou).
Hatching reported at the Douars Souflat, Mihoub, Aïn-Hasem, Metenane (Aïn-Bessem).
Hatching reported at Khelidj and Fedj Rih, Douar Barika (Barika) of eggs laid 27 April.
Hatching reported at Smaïl. Douar Bouzina (Aurès).
Hatching reported at the Douar Tablat (Tablat).

24 May 1933. — Hatching reported at the Douars Taïcha (Aumale).
Egg-laying reported in Oued Flidoun (Soummam) over 2 hectares.
A large swarm settled in the Aichour Valley (Arba) and laid over 40 hectares.
Isolated adults reported near Sidi-Moussa.
Swarms coming from the S settled at the Douars Tamellahat and Larjem (Chéliff) and laid over 30 hectares.
A pink swarm, coming from the S., settled at 10 a. m. at Seïar (Khenchela). It departed at 4 p. m. flying towards the N. N. E.
Hopper bands reported in the region of Seïar (Khenchela) travelling towards the N. N. W.
Hatching reported at Hassi Mestour, El-Medjena and Oued Seggueur (140 km N. N. W. of El-Goléa).

25 May 1933. — A swarm coming from the N. settled at Selmaya and M'siline (Boghari) and laid over 11 hectares.
Hatching reported at the Douar Ras-el-Aïoun (Corneille).
Three swarms settled at the Douar Lardjem (Chéliff) and laid.
A swarm coming from the N. E. settled at the Douar Oussera (Chellala) and laid over 8 hectares.
Hatching reported at the Douars Oussera, Serguine and Megane (Chellala) of eggs laid from 2 to 4 May.
Swarms settled at the Douars Ouled Ghalia and Zaccar (Chéliff) and laid.

A swarm coming from the S. W. settled near Lapasset (Cassaigne) covering 60 hectares, and laid.

Pink swarms coming from the S. settled at 3 p. m. at Négrine and Souklma (Tébessa). They departed at 10 a. m., flying towards the N.

Hatching reported up to 31 May in the N. of Aïn-Touta.

Hopper bands reported in the region of Khanga Sidi Nadji (Khenchela).

Hopper bands reported in the region of Sidi-Masmoudi (Aurès) travelling towards the N.

Pink swarms reported from 25 to 30 May in the regions of Amguid, N'goussa, Ouargla (Ouargla) flying towards the S.

26 May 1933. — Hatching reported at the Douars M'zita, Sidi-Brahim and El-Mehir (Bibans).

Serious laying reported near Turenne.

Swarms coming from the S. settled at the Douars Mhamid, Mesmoth, Tirnifine, Oued Eltat, Aouzalel (Palikao), and laid.

Egg-laying reported at Rovigo (near Algiers).

Hatching reported at the Douars Ain-Hazem and Mihoub (Aïn-Bessem).

A small swarm settled on the right bank of the Chéliff, at Pont-du-Chéliff, and laid.

Hatching reported at the Douars Tourtatsine and Mezrenna Aïn-Bessem (Tablat).

A pink swarm coming from the S. settled at 10 a. m. at El-Amra (Khenchela). It departed at 2 p. m., flying towards the N.

Hopper bands reported at Djebel Berga and Tabaalet, region of Ouldja (Khenchela), travelling towards the N. E.

Hopper bands reported in the region of Djellel (Khenchela).

General hatching at the Douar Bouzina (Aurès).

27 May 1933. — A swarm coming from the S. W. settled at 11 a. m. at the Maison-Carrée Botanic Station and laid on 29 May.

Large swarms passed Bordj-Ménaïel and settled on the banks of the Oued Isser.

Hatching reported at the Douar El Isseri (Palestro).

Large swarms settled at Ben-N'choud (Dellys) and laid in the Sebaou.

A swarm settled at Mleta (Tigzirt).

Various pink swarms coming from the S. settled between Seïar and El Amra (Khenchela), afterwards returning towards the S.

Hopper bands reported in the region of El Amra (Khenchela), travelling towards the N.

A swarm settled on the hills of Oued Sebaou (Abbo) and laid.

General hatching in the mixed commune of Marnia.

Hatching reported at the Douars of El-Ouzana and Tourtatsine (Tablat).

28 May 1933. — Hopper bands reported near Berrian (40 km N. of Ghardaïa).

A pink swarm reported at Fort Lallemand (160 km S. E. of Ouargla), flying towards the S.

Slight hatching at Assameur and Sohane (Arba).

Hatching reported from 28 to 31 May on the hills of Chéliff (Duperré).

29 May 1933. — Hatching reported at the Douars Bou-Saada, Oulad Khaled, Oulad Ameur Dehara, Oulad Ahmed, Oulad Sidi-Ziane (Bou-Saada).

A swarm settled at Issers and laid.

A small swarm coming from the S. settled near Frenda and laid.

Hatching reported at the Douar Mamora (Aumale).

A swarm settled near Rébeval and laid.

A swarm settled near Cape Matifou (near Algiers) and laid.

Hatching reported at the Douar Metenane (Ain Bessem).

Hatching reported at the Douars Sidi-Aïssa, Oular Ali ben Daoud, Zemlane and Tafraout (Sidi Aïssa).

Hopper bands reported at Bedeau and Titen Yahia (Télagh), these being the hatching of 7 May.

General hatching in the mixed commune of Maadid.

A pink swarm coming from the N. E. settled in the evening at Guerrara (Ghardaïa), leaving on 30 May and flying towards the S. W.

Hatching reported in the Valley of the Tafna (Remchi).

A small swarm reported at the Douar Akfadou (Upper-Sebaou).

30 May 1933. — Hatching reported at the Douar Oued Berdi (Aïn-Bessem).

A pink swarm coming from the S. settled at 10 a. m. near Seïar (Khenchela). It left on 1 June, flying towards the N.

A pink swarm coming from the S. settled at Ras Aicha (Khenchela).

A pink swarm coming from the S. S. E. settled at 5 p. m. at Boudoukhane (Khenchela). On 1 June it flew towards the N.

Hatching reported in the hills of Chéliff (Kherba).

31 May 1933. — Very large hopper bands converged from all directions towards the oasis of Laghouat.

A large pink swarm, coming from the S. settled at 2 p. m. at Metlili (28 km S. of Ghardaïa), leaving at 10 a. m. on 1 June and flying towards the N.

A large pink swarm, coming from the N. settled in the evening at Daïa ben Daoua (Ghardaïa). It departed on the morning of 1 June, flying towards the S.

Hatching reported at the Douar Ouled Anteur (Boghari).

Hatching reported at the Douar Aouzalel (Palikao).

Hatching reported at the Douar Oued Oughat (Berrouaghia).

Hatching reported at Oum Latlet and Lelhoud (Boghari).

Egg-laying reported at Noisy-les-Bains, Georges Clémenceau, Eugène Etienne, Hennaya, Mazagran (department of Oran).

Egg-laying reported at Seddouk and Zazmalt (department of Constantine).

Considerable hatching reported at the Douar Magra (Barika).

Various pink swarms coming from the S. settled at Taghit, Zaouia, El Amra, Seïar, Tisslit, Guern and Abiod (Khenchela).

A pink swarm coming from the S. settled at 4 p. m. at Tebourg Ahmed (Khenchela), departing on June 2 at 8 a. m. in a westerly direction.

**India: Plant Diseases in the Bombay Presidency** (1).

Panama Disease of bananas has broken out in a severe form in a plantation near Poona. The disease has spread to a few other localities, where suckers from diseased plants were planted. It is noteworthy, however, that only one variety of bananas (locally known as *Son*) is susceptible to this disease, while all the other varieties are reported to be resistant. Steps are being taken to localise infection, so that the disease may not spread over a wide area.

The cause of the gummosis of citrus in the Bombay Presidency has been determined by Mr. S. F. Ashby, Imperial Mycological Institute, London, as *Phytophthora palmivora* Butl.

*Leeina philippinensis* Petr. was isolated from stems of sugarcane grown by the Belapur Company, Ltd., near Poona. The fungus was identified by Mr. S. F. Ashby.

**Southern Rhodesia: Locust Invasion, 1933** (2).

Monthly Report No. 6, May, 1933.

1. *Nomadacris septemfasciata.*

Winged swarms of this species continue to move about in various directions practically the whole of the colony being included in these movements.

The flights are not of a definitely migrationary character but a general westerly drift is apparent, notwithstanding the fact that some easterly movements are also recorded.

There may be some tendency for the swarms to leave the dry low veld for the higher ground. Large swarms have appeared in the humid zone close to the eastern border where no hoppers occurred. There appears to be a tendency for swarms to continue haunting certain localities in this zone flying around without any definite direction. The higher parts of the Melsetter district, including the Chipinga sub-district are thus affected.

The flight of the swarms is generally low and characterised by much settling, the swarms tending to ' roll ' along over the ground and not to fly high above it.

Development of red pigment on the head and pronotum of the insects has been noted during the month, and at the end of the month there were indications of the pink suffusion at at the base of the hindwings, although this had attained only a very small fraction of its full development.

2. *Locusta migratoria migratorioides.*

There has been no record of this species in the colony during the month.

Eggs have been laid by caged specimens from the first week of the month, but no hatching has as yet taken place.

(1) Communication from the official correspondent of Institute, Mr. B. N. Uppal, B. A., Ph. D., Plant Pathologist to the Government, Bombay Presidency, Poona.

(2) Communication from the official correspondent of the Institute, Mr. Rupert W. Jack, F. E. S., Chief Entomologist, Department of Agriculture, Salisbury, Southern Rhodesia.

3. Feeding.

Whereas the hoppers of both species confined their attention more or less to *Gramineous* crops, the winged swarms have attacked a wide variety of plants including tobacco but the type of feeding suggests that latterly the object has been moisture more than food. This phase has followed a period of voracious feeding immediately after the attainment of maturity.

4. Parasites and Disease.

No disease has been discerned amongst the swarms, and parasites noted have been limited to one Dipterous larva (unidentified) and a number of instances of infestation with thread worm.

5. Enemies.

Apart from natives, who are collecting the locusts for consumption whenever possible, enemies have not been much in evidence.

6. Destruction of Hoppers.

The campaign came to an end early in the month.

7. Damage to Crops.

Injury to European grown crops reported has been limited to a comparatively few small patches of winter grain during the earlier part of the month. The grain in most cases was young and is growing again.

Late Kaffir millet is reported to have been destroyed by winged swarms in some areas.

## LEGISLATIVE AND ADMINISTRATIVE MEASURES

**French West Africa** (**Niger Colony**). — A Decree of 25 February 1933 contains regulations regarding the methods of locust control in the Niger Colony and provides for awards for their destruction. (*Bulletin Mensuel de l'Agence Economique de l'Afrique Occidentale Française*, Paris, juin 1933, 14e année, nº 150, p. 185).

**Germany** (**Prussia**). — The Decree of 10 March 1933 for the protection of animals and plants forbids *inter alia* the killing, capture or chase of bats (*Chiroptera*) and, in general, of all species of birds. The following are however excluded from such protection:— crows and rooks (*Corvus frugilegus* L., *C. cornix* L., *C. corone* L.), sparrows (*Passer montanus* L., *P. domesticus* L.) and certain birds of prey. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Juli 1933, Bd. V, Nr. 1, S. 11-26).

**Germany** (**Rhine Province**). — By Decree of 18 November 1932, with a view to the control of *Nectria coccinea* var. *sanguinella* and *Dothichiza populea* on the Canadian poplar [*Populus monilifera*], similar measures to those adopted for the District of Münster [see this *Bulletin*, 1933, No. 1, p. 10] have been prescribed in the District of Düsseldorf. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Juli 1933, Bd. V, Nr. 1, S. 28).

**Cirenaica**. — The presence of the *Bryotropha plebejella* having been again ascertained on tomato plants, it is forbidden by Governmental Decree dated 16 June 1933 to export tomatoes from the Colony until further order. (*Bollettino Ufficiale del Governo della Cirenaica*, Bengasi, giugno 1933, anno XXII, n. 6, p. 388).

**Italy**. — By Ministerial Decree of 23 June 1933 the communes of Monteroduni and Isernia in the province of Campobasso have been declared infected with grape phylloxera. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 8 luglio 1933, anno 74°, n. 157, p. 3031).

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[In Italy and the Italian Colonies. No new disease worth considering was observed during 1932].

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[*Fusarium nivale*].

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[*Armillaria mellea, Bacterium tumefaciens, Dothichiza populnea, Didymosphaeria populina, Polyporus sulphureus, Fomes ignarius, Viscum album, Melampsora pinitorqua, M. laricis-tremulae, M. allii-populina, Ascochyta populorum, Septoria populi, Hadrotrichum populi, Marssonina castagnei; Lymantria dispar, Malacosoma neustria, Melolontha vulgaris, Polyphylla fullo, Lytta vesicatoria, Phyllobius viridicollis, Phyll. argentatus, Byctiscus betulae, Stilpnotia salicis, Vanessa antiopa, V. polychloros, Dicranula vinula, Phalera bucephala, Melasoma populi, Byct. populi, Orchestes populi, Plagiodera versicolor, Phyllobius cinerascens, Dorytomus longimanus, Lachnus viminalis, Pemphigus bursarius, Cossus cossus, Trochilium apiforme, Saperda carcharias, S. populnea, Cryptorrhynchus lapathi, Exilia timida, Agrilus viridis, Eccoptogaster intricatus, E. multistriatus, Xyleborus saxeseni, Lepidosaphes ulmi, Chionaspis salicis, Aspidiotus ostreaeformis, Rhabdophaga salicis-perda*].

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[Foreword by R. Anstead].

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[This handbook opens with five analytical tables based on the characteristic alterations caused in plants by attacks of pests. The tables deal respectively with:– (1) horticultural plants in general; (2) fruit yielding plants; (3) vegetables; (4) ornamental plants; and (5) fruit, vegetable and ornamental plants arranged in alphabetical order of their common names in German.

These are followed by a description of the pests arranged in systematic order with notes on their life history, damage and methods of control, and an alphabetical list of insecticides.

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## NOTES

**VIIIth International Ornithological Congress.** — This Congress is to be held at Oxford in July 1934, under the presidency of Dr. E. Stresemann, of Berlin.

Prof. ALESSANDRO BRIZI, *Segretario generale dell'Istituto, Direttore responsabile.*